

Vaccine Company Develops Nasal Antiseptic That Kills Coronavirus in Lab Studies

NIH-funded company BlueWillow Biologics is working to develop vaccines that have traditionally been difficult to make, including a vaccine for anthrax and one for Respiratory Syncytial Virus (RSV), a virus that mostly infects children and the elderly. But years of vaccine research have also led to a very different but timely product.



[NanoBio Protect](#) is an over the counter nasal antiseptic that reduces the risk of respiratory infection. BlueWillow CEO David Peralta describes it as “alcohol-free hand sanitizer for your nose.” The product is made up of very small oil-based droplets that can permeate skin inside the nose but don’t go much further, meaning it’s effective for hours but stays in an area where viruses or bacteria gain entry into our bodies. The oiliness of the droplets allows them to stick to and destroy pathogens. In laboratory studies, NanoBio Protect destroyed different types of bacteria and viruses, [including the virus that causes COVID-19](#).

But the basic research behind NanoBio Protect—originally discovered at the University of Michigan and then developed by BlueWillow—was meant to design vaccines that could be administered nasally to equip that surface with immunity, allowing the immune system to respond when an invading microbe lands on a mucous membrane instead of after it has infiltrated the body. BlueWillow is working on developing nasal vaccines for a variety of pathogens.

The company has received Small Business Innovative Research (SBIR) grants and contracts from the National Institute of Allergy and Infectious Diseases (NIAID) to develop nasal vaccines for sexually transmitted infections and pandemic influenza, the latter of which is in phase one clinical trials. Most recently, BlueWillow received a Fast-Track SBIR contract from NIAID to develop a nasal peanut allergy vaccine. The vaccine, which has shown promise in eliminating peanut allergies in mice, could start clinical trials in early 2022.

“NIH has really provided a tremendous amount of support...to help us advance our understanding of the technology,” says Peralta. “Without NIH funding, we would not be anywhere near close to where we are.”

The company has been selling their NanoBio Protect nasal antiseptic since spring of 2020. “We probably have nearly 20,000 users at this point and not a single complaint,” says Peralta. The company is making the first million units of NanoBio Protect, which is currently only available in the United States, although Peralta notes that there is interest abroad. To help protect front-line workers during the coronavirus outbreak, [BlueWillow is donating 40,000 bottles of NanoBio Protect](#) to hospitals and health care workers.



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